Feasibility Study

Technical Feasibility:

1) Users' and analysts' familiarity with the business area:
   The business area is trading and selling/buying within the NYUAD community. Both users and developers have high familiarity with the business area, with almost all users and some of the developers having participated in a trade before.

2) Familiarity with technology:
   The technicals to be used in the system are:
   - Cross-Platform development tool: Flutter, Android Studio, and Xcode
   - Programming languages: Dart
   - Database Management Systems: Firebase

   Most of the team members are familiar with Android Studio and Xcode, and some team members are familiar with Flutter and Firebase. Overall, there is a basic understanding of the language but all team members need to work to adjust to platforms/languages new to them.

3) Project size:
   The project will take approximately 4 months to complete with 4 people working on it (estimated via Function Point Estimation).

4) Compatibility with existing system:
   The existing method is trading items on Facebook groups such as RoR, Female RoR and NYUAD Free & For Sale. There is no existing centralized system, therefore all the existing listings will have to be added manually. Since the trading is very quick and item listings/exchanges are highly time sensitive, most of the previous data on Facebook groups is invalid anymore. Therefore, there is no compatibility risk with the existing method.

5) Conclusion:
   The risk in this stage is high due to the team's familiarity with the technology to be used and project size given the time constraints.

Economic Feasibility:

The only anticipated economic cost to the system are domain expenses. Buying a domain would cost around $9 yearly. This makes the project economically feasible without any risks.

Costs	**Period 1**	**Period 2**	**Period 3**	**Period 4**	**Period 5**	**Period 6**	**Total**
Domain Expenses	1.5	1.5	1.5	1.5	1.5	1.5	9
Support and Maintenance				10	10	10	30
Total Costs	**1.5**	**1.5**	**1.5**	**11.5**	**11.5**	**11.5**	**39**
Benefits							
Increase number of users				30	30	30	90
Total Benefits				30	30	30	90
NCF	(1.5)	(1.5)	(1.5)	18.5	18.5	18.5	51
CNCF	(1.5)	(3.0)	(4.5)	14.5	33	51.5	102.5

Numbers are in USD
NCF: Net Cash Flow
CNCF: Cumulative Net Cash Flow
One period corresponds to one month

- The return on investment (ROI):
  ROI = $\frac{\text{Total Benefits - Total Costs}}{\text{Total Costs}}$
  $= \frac{90 - 39}{39} = \frac{51}{39} = 1.31\%$
- The break-even point (BEP):
  BEP = $\frac{\text{(period net cash flow) – (cumulative net cash flow)}}{\text{(period net cash flow)}}$
  $= \frac{18.5 - 14.5}{18.5} = \frac{4}{18.5} = 0.21\%$
  0.0021*1*30 = 0.06 ~ 1 day (upper boundary)
  So the project will take 4 months and 1 day to break even

Conclusion: The ROI is good for a university program and the BEP is reasonable, so the risk is low.